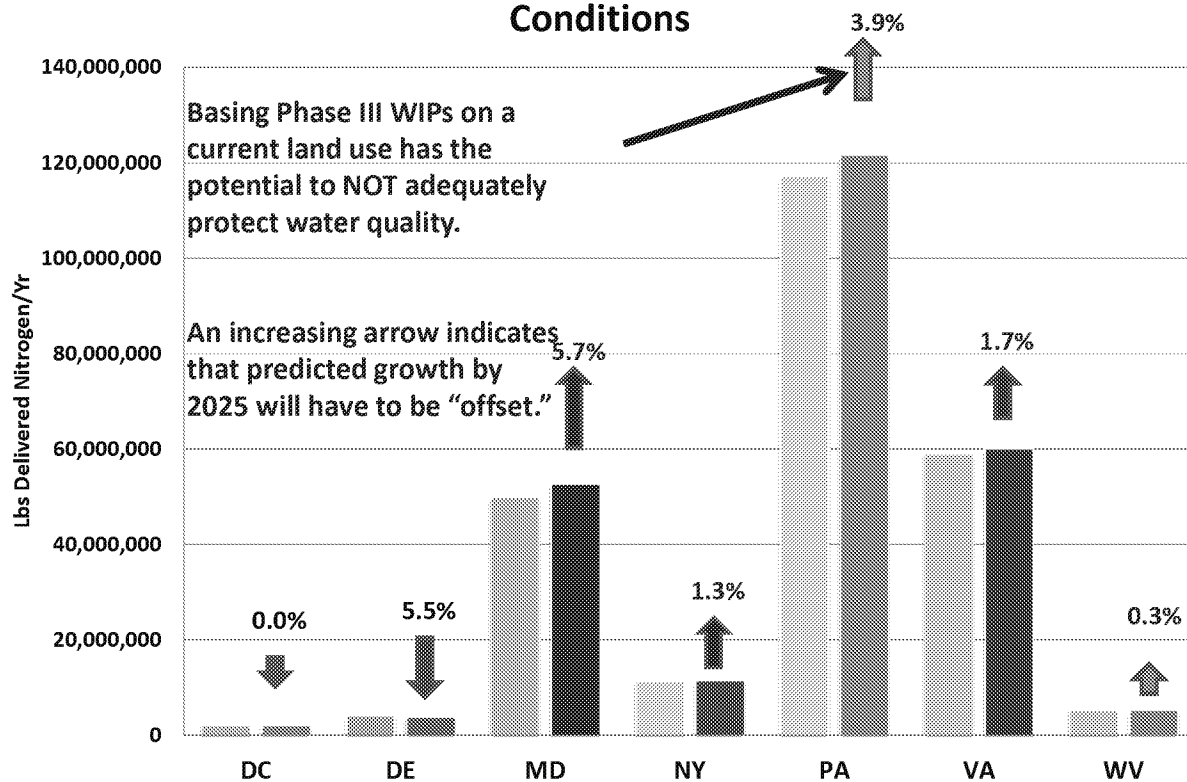# Developing Phase III WIPs and Milestones on Future Forecasted Conditions
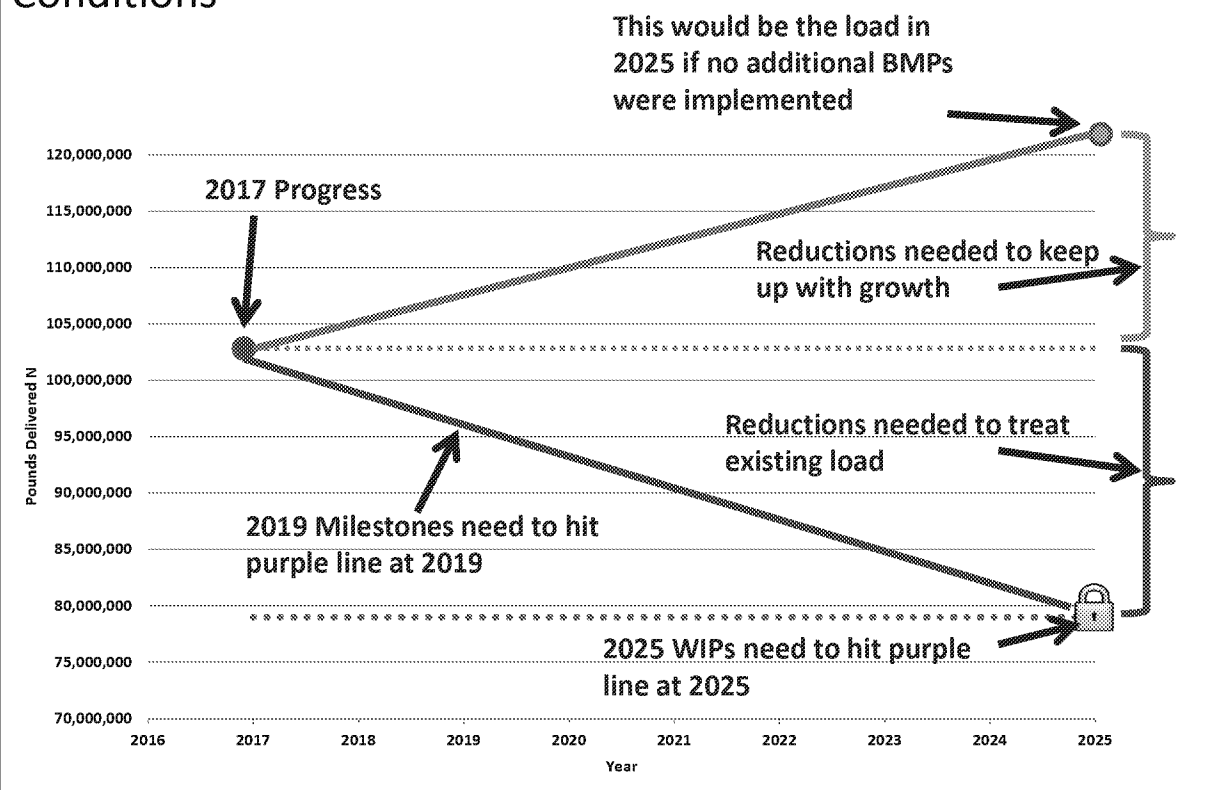
What?

Decisions for the future:

- How do we arrive at planning targets for the Phase III WIPs?

- What is the guidance for creating the Phase III WIPs?
    - This requires an answer to the following (among other questions to be fleshed out in the future):
        - Should Phase III WIPs be developed on current conditions (land use, septics, animals, etc.) or on future forecasted conditions?

- How do we judge progress towards planning targets?

Why? Comparing 2014 Progress on 2014 and 2025 Conditions

Basing Phase III WIPs on a current land use has the potential to NOT adequately protect water quality.

An increasing arrow indicates that predicted growth by 2025 will have to be "offset."

Y-axis: Lbs Delivered Nitrogen/Yr

State	Percentage
DC	0.0%
DE	5.5%
MD	5.7%
NY	1.3%
PA	3.9%
VA	1.7%
WV	0.3%

How? Developing Phase III WIPs on 2025 Forecasted Conditions

This would be the load in 2025 if no additional BMPs were implemented

2017 Progress

Reductions needed to keep up with growth

Reductions needed to treat existing load

2019 Milestones need to hit purple line at 2019

2025 WIPs need to hit purple line at 2025

Detailed How: Steps for Using 2025 Forecasted Conditions

1. Establish Planning Targets

2. Run 2017 Progress on 2017 Base Conditions – this becomes the baseline

3. Run 2017 Progress on 2025 Base Conditions – this is the growth scenario

4. Define needed reductions from 2017 Progress to Planning target – this represents reductions need to treat current conditions

Detailed How cont'd: Steps for Using 2025 Forecasted Conditions, cont'd

5. Define needed reductions from Growth Scenario compared to 2017 Progress scenario – this represents efforts needed to hold the line

6. Develop Phase III WIP on 2025 Forecasted Conditions to hit Planning Target, and develop milestones on future conditions to hit Planning Trajectory, automatically accounting for growth

How for Other Decision?
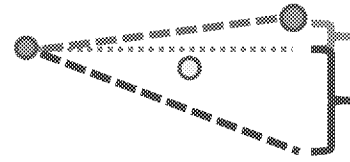## Establish State Basin TN Planning Targets
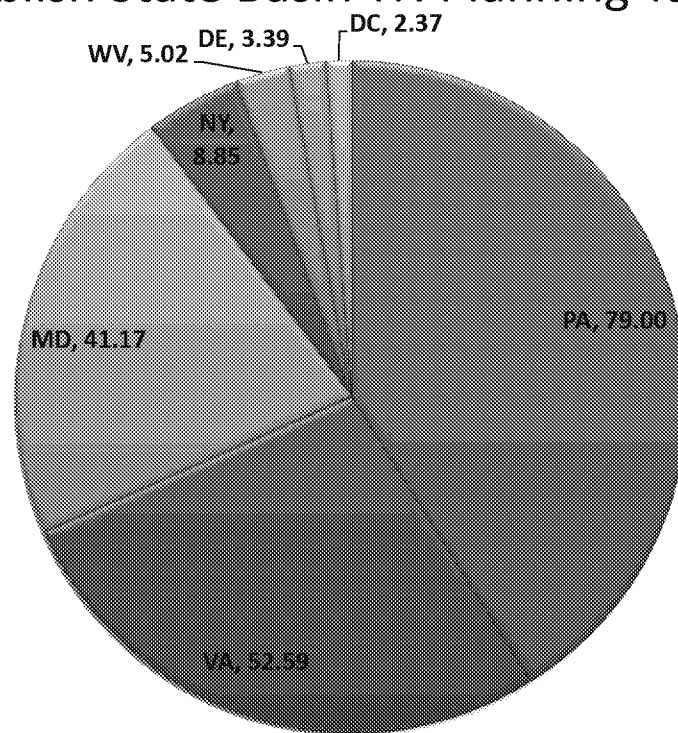
Step 1: Determine assimilative capacity of the Bay.

Step 2: Determine planning targets at state-basin level.

Step 3: Based upon WIP results, there can be small adjustments to this planning target.

Pie chart labels: WV, 5.02 — DE, 3.39 — DC, 2.37 — NY, 8.85 — MD, 41.17 — PA, 79.00 — VA, 52.59

How for Other Decision? Example 2023 Milestones Evaluation

Sector	2021 Progress (lbs TN Del/Yr)	2023 Growth Trajectory (lbs TN Del/Yr)	2023 Progress (lbs TN Del/Yr)	2023 Allocation Trajectory (lbs TN Del/Yr)
Agriculture	52.30	50.62		45.58
Developed Runoff	14.01	16.24	13.95	14.62
Wastewater +CSO	7.88	8.60		7.74
Septic	2.05	0.96	0.93	0.86
Forest+	17.76	19.10	15.81	17.2
All Sectors	94.00	95.50	93.00	86.00

•A triangle growth plot can be developed for each state sector and for ALL sectors combined.
•2021 Progress number are taken from the green line.
•2023 Growth Trajectory numbers are taken from the blue line.
•2023 Allocation Trajectory numbers are taken from the purple line.
•2023 Progress is the plotted as the yellow dot.
•Red = State is not on track to keep up with growth because 2023 Progress loads are higher than 2021 Progress OR 2023 growth trajectory.
•Yellow = State is on track to keep up with growth, but not on track to meet 2023 trajectory because loads are lower than 2021 Progress OR 2023 Growth Trajectory, but higher than 2023 Allocation Trajectory.
•Green = State is on track to keep up with growth and is on track to meet 2023 Allocation Trajectory because loads are lower than 2021 Progress OR 2023 Growth Trajectory AND lower than 2023 Allocation Trajectory.

Glossary

- **Assimilative Capacity = Loading Capacity**– The greatest pollutant loading a water body can receive without exceeding water quality standards.
- **Planning Targets** – The loading targets which the WIPs were trying to achieve; one number each for TN, TP and TSS for each state-basin.
- **Sector Targets** – The targets for each sector broken out from the planning targets based upon the distribution of loads in the WIPs.
- **Phase III WIPs** – Implementation plans written to reduce pollutant loads to the allocation in the year 2025.
- **Planning Trajectory** – Straight line between baseline progress (such as 2017 Progress) to the planning target in 2025. Milestones should be developed to hit this line in any given year.
- **Growth Scenario** – Baseline progress (such as 2017 Progress) on a 2025 future condition. The resulting pollutant load in this scenario represents the load that would occur if NO additional BMPs were implemented and growth occurred as predicted.
- **Growth Trajectory** – Straight line between baseline progress (such as 2017 Progress) to baseline progress on a 2025 growth scenario.
- **Progress** – A scenario which estimates pollutant loads resulting from current year BMP implementation on current year base conditions (such as 2017 Progress).
- **Offset** – Any projected load above and beyond current Progress loads that must be reduced. Note, an increase in forest load should NOT be offset.
- **Background Conditions** – Best estimate of watershed conditions for any given year/scenario; examples of conditions include animal and human populations, land uses, crops, chemical fertilizer use, septic systems, etc.